

CLAIMS

1. A process for producing an aqueous pigment dispersion for ink-jet recording, comprising a first step of kneading (1) a styrene-acrylic type resin with a styrene type monomer unit of 50 to 90 mass %, and at least one unit selected from ,an acrylic monomer unit and a methacrylic monomer unit, having an acid value of 50 to 300, (2) a pigment, (3) a basic compound, and (4) a humectant to produce a solid colored kneaded product, and a second step of dispersing the solid colored kneaded product in an aqueous medium comprising water or water and a humectant.
2. The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 1, wherein the (1) styrene-acrylic type resin has a mass average molecular weight of 5,000 to 40,000, and the (2) pigment is at least one pigment selected from the group consisting of an azo type yellow pigment, a quinacridone type red pigment, a phthalocyanine type indigo blue pigment, and a carbon black type black pigment.
3. The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 2, wherein the mass percentage of the (1) styrene-acrylic type resin, the (2) pigment, and the (4) humectant in the first step is (1) 10 to 100 parts, (2) 100 parts, and (4) 20 to 100 parts, repectively.
4. The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in any one of claims 1 to 3, wherein the kneading in the first step is performed using a planetary type kneading apparatus.

5. The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 4, wherein the kneading temperature in the first step is not higher than a glass transition temperature of the (1) styrene-acrylic type resin.

5

6. The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in any one of claims 1 to 3, wherein the (3) basic compound is an alkali metal hydroxide, and the (4) humectant is a polyhydric alcohol having a boiling point of not less than 170°C.

10

7. The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in any one of claims 1 to 3, wherein the compounding amount of the (3) basic compound is an amount corresponding to 0.8 to 1.2 times the amount for neutralizing all carboxylic groups of the (1) styrene-acrylic type resin.

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8. An aqueous ink for ink-jet recording comprising the aqueous pigment dispersion as set forth in any one of claims 1 to 3 as a main component.

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9. The aqueous ink for ink-jet recording as set forth in claim 8 which is used for ink-jet recording in a thermal ink-jet type.